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environmental and engineering excellence

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December 21, 1987

Ms. Barbara Newman
Region I
U.S. Environmental Protection Agency
J.F.K. Federal Building
Boston, Massachusetts 02203

Re: UniFirst Corporation, Woburn, Massachusetts

Dear Ms. Newman:

This letter describes the objectives and means of performing a shallow-bedrock aquifer test at the UniFirst Corporation site in Woburn, Massachusetts. The proposed work is based on the findings to date derived from the continuing investigation and discussions among UniFirst's technical consultants and the EPA. The following sections reiterate the scope of work that has recently been discussed with the EPA in several telephone conversations.

OBJECTIVE

In order to investigate the potential for an effective source-control remedial action that will remove product and contain ground-water-borne compounds within the site, it will be necessary to investigate the hydraulic characteristics of the shallow bedrock in the source area and the concentration of selected ground-water-borne compounds. These data will provide some of the information necessary for evaluation of the potential for ground-water recovery wells and a treatment system for possible source-control remedial action. Means of developing similar data for deeper bedrock ground-water will be described in a separate letter.

DESCRIPTION OF THE WORK

Well UC8, which is located at the point at which the product is believed to have entered the ground-water system, will be pumped at a low rate, approximately 0.5 gallons per minute. This pumping rate has been determined from the results of a rising-head test performed on well UC8. This well is 20.8 feet deep, and the top of rock is at 8.3 feet. Pumping from UC8 will draw ground water from the lower most unconsolidated deposits and the upper bedrock. This zone contains the highest levels of compounds detected on the site.

Reaction to pumping from well UC8 will be measured in well UC8 and eight other shallow bedrock wells: UC 4, 5, 15, 16, 17, 18, 19 and 20 (Figure 1). These measurements will be taken continuously with an In-Situ, Inc. transducer system. In addition, response at depth will be measured in wells UC7A, 9 and 10. These three wells contain Solinst multi-level ground-water sampling systems. Therefore, they are not able to receive transducers. Ground-water levels will be measured on approximately an hourly basis by using an electric sounder at well UC7A and the built-in air lines in wells UC9 and UC10.

A series of initial (before pumping) ground-water-level measurements will be taken in all wells to determine if there are diurnal effects and to ensure that ground-water levels have stabilized after installation of the transducers. Pumping will continue for 24 hours or until the handling capacity for the discharge water has been achieved. Recovery will be measured in the same set of wells.

The discharge from well UC8 will be sampled and analyzed for volatile, base/neutral and acid extractable organic compounds, total suspended solids, Iron, Manganese and hardness upon initiation of pumping and at four-hour intervals thereafter until the end of pumping. The analyses will be performed according to appropriate EPA procedures at ERT's laboratory in Wilmington, Massachusetts. Standard quality control and quality assurance protocols will be observed for all sampling and analytical work. The discharge water will be collected in DOT approved and appropriately labeled drums. The discharge water will be handled, manifested and transported by Franklin Pumping Service, Inc. of Wrentham, Massachusetts. The ultimate means of disposal/destruction will be determined by the results of the laboratory analyses. All handling, transportation and disposal/destruction will be carried out by appropriatly licensed companies.

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SCHEDULE

ERT proposes to perform this work during the week of January 11, 1988.

Should you have any questions regarding the proposed work, please do not hesitate to call me.

Sincerely,

Jeffrey T. Lawson, P.G.
Senior Program Manager

JTL/cjr

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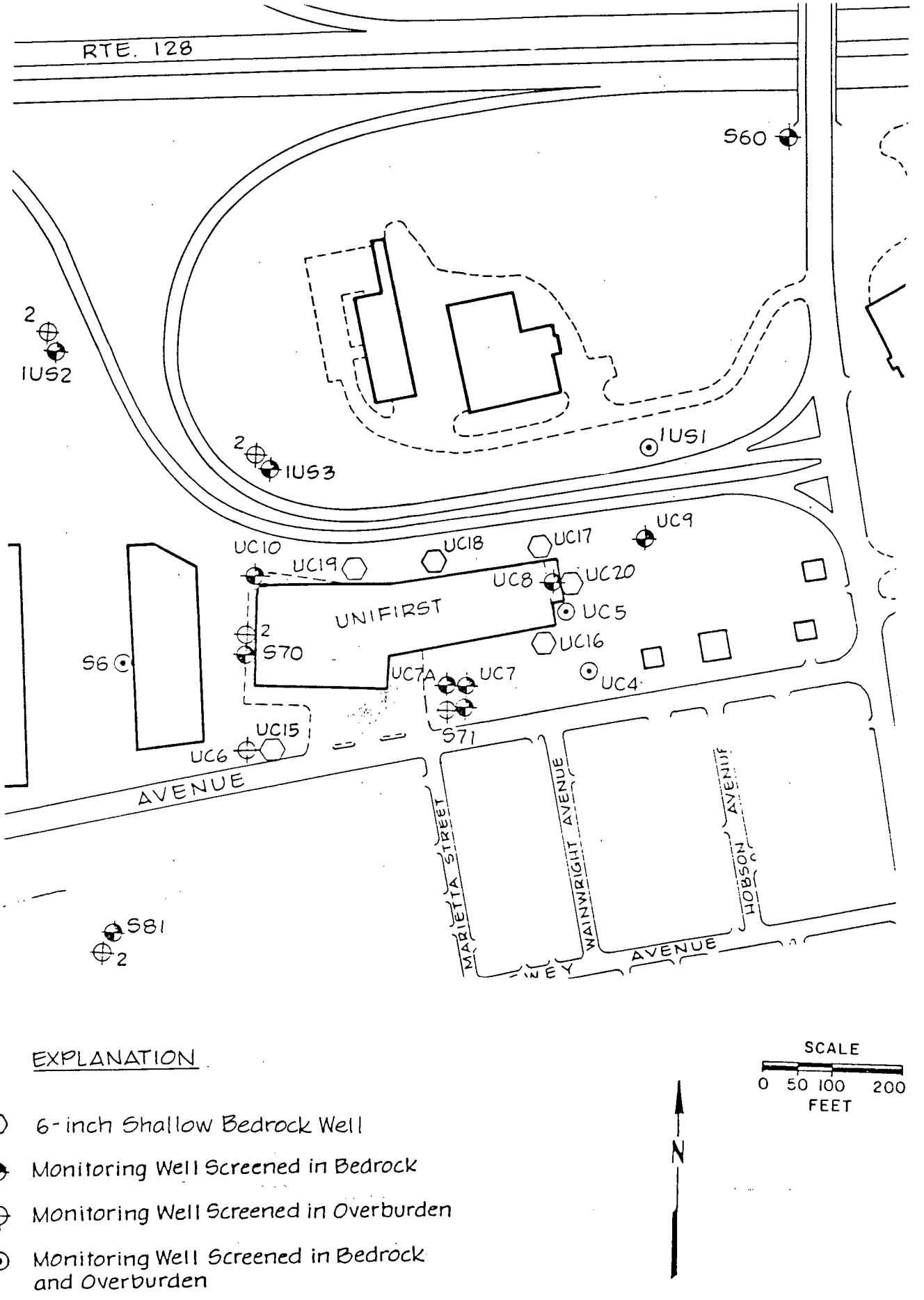

Figure 1. Well Location Map